AMENDMENTS TO THE CLAIMS

In accordance with the revised format for making amendments as set forth in 37 C.F.R. § 1.121, amendments to the present claims are made with additions to the claim being indicated by way of underlining and deletions being indicated by way of strikethroughs. Additionally, each claim is provided with a status indication in a parenthetical immediately following the claim number (i.e., Original, Currently Amended, Previously Amended, Allowed, etc.).

1. (Presently Amended) A device for detecting radiation, said device comprising:

~~an~~ a monolithic silicon integrated circuit;

a first sensor formed in said monolithic silicon integrated circuit for detecting a first component of radiation emitted by a radiation source;

a second sensor formed in said monolithic silicon integrated circuit, said second sensor positioned with respect to the first sensor to detect a second component of the radiation emitted by the radiation source, wherein said first and second sensors are constructed and arranged to cooperate with one another to determine the location of the source of origin of the radiation.

2. (Presently Amended) A device for detecting radiation, said device comprising:

~~an~~ a monolithic silicon integrated circuit; and

a first and second sensor formed in the monolithic silicon integrated circuit for sensing a first and second component of radiation emitted by a radiation source, said first

and second sensors positioned with respect to one another to determine the location of the source of origin of the radiation.

3. (Presently Amended) A system for determining the location of origin of incident radiation, said system comprising:

~~an~~ a monolithic silicon integrated circuit;

a first and second sensor formed in the monolithic silicon integrated circuit and being positioned on said integrated circuit to detect the X and the Y components of radiation impinging on said sensors; and

a circuit connected to said first and second sensor outputs, said circuit adapted to calculate the azimuth and elevation of incident radiation.

4. (Presently Amended) A system for determining the location of the source of origin of radiation~~,~~

~~said system~~ comprising:

~~an~~ a monolithic silicon integrated circuit;

a first and second sensor formed in the monolithic silicon integrated circuit and positioned for detecting a first and second component of incident radiation; and

means for calculating the azimuth and elevation of the incident radiation from the first and second directional components detected by the first and second sensors.

5. (Presently Amended) A method for detecting radiation~~, said method~~ comprising the steps of:

detecting a first and second component of incident radiation on ~~an~~ a monolithic silicon integrated circuit; and

outputting from the monolithic silicon integrated circuit photocurrents corresponding to the first and second components of the impinging radiation, to calculate azimuth and elevation of the incident radiation.

6. (Presently Amended) A method for determining the location of the source of origin of radiation, said method comprising the steps of:

detecting a first and second component of incident radiation on ~~an~~ a monolithic silicon integrated circuit; and

calculating azimuth and elevation of incident radiation from the first and second components.

7. (Presently Amended) A device for detecting the direction of radiation, said device comprising:

~~an~~ a monolithic silicon integrated circuit;

a first detector formed in the monolithic silicon integrated circuit having a first output that indicates a first dimensional direction of incident radiation; and

a second detector formed in the monolithic silicon integrated circuit, said second detector positioned and arranged with respect to said first detector and having a second output indicating a second dimensional direction of the incident radiation, wherein said first output and said second output provide the azimuth and elevation of the radiation.

8. (Original) A device for detecting the direction of incident radiation as claimed in claim 7 wherein said first and second detectors are positioned nonparallel with respect to each other.

9. (Presently Amended) A device for detecting the direction of incident radiation as claimed in claim 8, wherein said first detector includes two bipolar junction phototransistors having opposing and convergent base regions such that impinging radiation produces ~~a~~ an amplified photocurrent in each of said bipolar junction phototransistors and said first output is a differential current output indicating the angle of incidence of the impinging radiation in the first dimensional direction.

10. (Presently Amended) A device for detecting the direction of radiation as claimed in claim 9, wherein said second detector includes two bipolar junction phototransistors having opposing and convergent base regions such that impinging radiation produces ~~a~~ an amplified photocurrent in each of said bipolar junction phototransistors and said second output is a differential current output indicating the angle of incidence of the impinging radiation in the second dimensional direction.

11. (Presently Amended) A device for detecting the direction of radiation as claimed in claim 10, said device further including a reference monolithic silicon detector, said reference detector integrally producing an amplified current output.

12. (Original) A device for detecting the direction of radiation as claimed in claim 11 further including a computational device that normalizes said first and second differential

current outputs by dividing the differential current outputs by the reference detector current output, and that translates said differential outputs into azimuth and elevation of incident radiation.

13. (Presently Amended) A system for determining the azimuth and elevation of incident radiation, said system comprising:

an monolithic silicon integrated circuit having a first and second detector for detecting a first and second dimension of the direction of the incident radiation, said first and second detector having integrally amplified differential current outputs indicating a first directional component and a second directional component of the radiation;

a reference detector having an amplified current output; and

a computational device that normalizes said amplified differential current outputs by dividing said amplified differential outputs by the amplified current output of said reference detector and further translating said differential outputs into azimuth and elevation of incident radiation.

14. (Presently Amended) A system for detecting the azimuth and elevation of radiation as claimed in claim 13 wherein said first and second monolithic silicon detectors are positioned nonparallel with respect to each other.

15. (Presently Amended) A system for detecting the azimuth and elevation of radiation as claimed in claim 14 wherein said first detector includes two bipolar junction phototransistors having opposing and convergent base regions such that incident radiation produces an amplified photocurrent in each of said bipolar junction phototransistors and

said first output is a differential current output indicating the angle of incidence of the first dimension of the direction of the incident radiation.

16. (Presently Amended) A system for detecting the azimuth and elevation of radiation as claimed in claim 15 wherein said second detector includes two bipolar junction phototransistors having opposing and convergent base regions such that impinging radiation produces an amplified photocurrent in each of said bipolar junction phototransistors and said second output is a differential current output indicating the angle of incidence of the second dimension of the direction of the incident radiation.